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Container

The present invention relates to a packing and displaying box for receiving a multitude of primary packages, comprising a bottom surface, a front wall, a rear wall and two side walls, to a combination of primary packages and a packing and displaying box containing them and to a blank for making a packing and displaying box according to the present invention.

Generally, industry producing consumer goods designs and delivers a multitude of single and small packages (called from this point onwards primary packages) which are located in a bigger packing box, especially for easy transport and often called secondary packaging. Very often these bigger packing boxes are constructed in a way that they can also be directly put into the shelves of shops and supermarkets allowing the consumer to take out the single primary packages which he wants to buy. To draw consumer's attention to the primary packages, it is important that the holding packing box is on the one hand formed in a way that the primary packages are not completely hidden by the packing box while being at the same time easy to take out from the packing box. On the other hand, however, the packing box has to stabilize the primary packages to avoid disorder of the primary packages within the packing box and to ensure an attractive appearance in the shelves of the shop or supermarket. This last requirement is normally fulfilled by using a compact distribution of the packages within the packing box (i.e. not allowing for any free space for the packages to move). This normally avoids disorder of the packages at least until the consumer removes one such package from the packing box thereby creating free space that will allow subsequent free movement of the packages.

The problem of package disorder within a packing box is particularly acute when the box is designed to be also a display packaging and is therefore provided in its open state with side walls which have a height substantially lower than the height of the primary packages contained therein to permit a good visibility of such packages by

- 5 the consumer. In this case not only package disorder will occur but it will also be associated with the effect of the primary packages falling down to their sides thereby reducing consumer perception of the packing box's contents.

Packing boxes are known which fulfill only one feature mentioned above, e.g. only stabilizing the primary packages within a packing and displaying box, but making it  
10 more difficult to take them out, for instance by providing a packing box with side walls having a height which corresponds to the total height of the packages contained therein This solution does not avoid however the problem of packaging disorder and falling down once the packing box has been partially emptied by removing some of the primary packages.

- 15 It is therefore an object of the present invention to provide a packing and displaying box for receiving a multitude of packages, which overcomes the drawbacks known in the prior art, especially to provide an improved stabilization of primary packages combined with an enhanced visibility of the packages contained therein and an easy removal therefrom. It is an additional object of the present invention to provide a  
20 combination of primary packages and a packing and displaying box to contain and display the primary packages ensuring that they will neither get disordered within the packing box nor fall down to their sides. It is still an additional object of the present invention to provide a single-piece blank for making a packing and displaying box according to the invention.

- 25 The first two objects are achieved in that the side walls of the packing and displaying box have flaps in the area of their upper edges, the flaps projecting inwardly and being aligned in a position departing substantially from the verticality, preferably forming an angle with the vertical of more than 40°, more preferably more than 60°, still more preferably more than 80° and most preferably of 90° (angle of 90° with the  
30 vertical).

- 5 In a preferred embodiment of the invention, said flaps are arranged alternately on the side walls providing at least one flap per primary package.

Alternatively, said flaps are arranged alternately on the side walls providing at least one flap per primary package except for the first and/or last package in the packing and displaying box.

- 10 In a preferred embodiment, each flap is loosely engageable with one primary package.

In a preferred embodiment the primary packages show at their surfaces facing the side wall of the packing box and confronted with the flaps an indentation for loose engagement with such flaps.

- 15 In another embodiment, the packing and displaying box is made of a blank, which is made of cardboard.

Preferably, the side walls of the packing and displaying box are double-walled

In one alternative of the invention, the front and rear walls are fixed to the side walls by means of rough surfaces which are retained within the double-walled side walls.

- 20 In another alternative, the front wall is substantially cut out.

The third object, namely providing a single-piece blank for making a packing box, is achieved in that the side walls comprise extensions for engaging into grooves punched on the bottom surface when the blank is folded, and the side walls comprise

5 flaps slitted therein and projecting inwardly and being aligned in a position departing substantially from the verticality, preferably forming an angle with the vertical of more than 40°, more preferably more than 60°, still more preferably more than 80° and most preferably of substantially 90° when the blank is folded.

10 In a preferred embodiment, the blank comprises folds and double-folds for folding the blank according to a specific pattern.

In a most preferred embodiment, the folds and double-folds comprise small incisions.

Surprisingly it was found that by arranging small flaps inwardly on the side walls of the packing and displaying box according to the present invention, the primary packages located therein could be stabilized and could be prevented from falling,  
15 whereas it could also be achieved that the packing and displaying box has only small dimensions, therefore not covering the primary packages and providing an easy take out. The flaps of the packing and displaying box may be loosely engageable with the primary packages and therefore prevent falling. An attractive appearance of the packing box with the primary packages is ensured. Further, it was surprisingly found,  
20 that the specific blank disclosed enables an easy making of the packing box of the invention.

A particular advantage of the blank according to the invention is that the flaps position themselves in the inwardly projecting position when the double side walls are folded over themselves when the packing box is erected, without the need of any  
25 actuation on the flaps. This is advantageous as it simplifies the erecting process resulting in the possibility of using a simpler erecting machine and in a shortage of the time needed for erection of the packing box.

5 Further advantages and features of the present invention will now be described in detail with appropriate reference to the accompanying drawings, wherein

Fig. 1 shows a blank for making a packing and displaying box according to the present invention; and

Fig. 2 is a perspective view of a folded and assembled packing and displaying box  
10 according to the invention filled with primary packages.

Fig. 1 shows a blank 1 of the present invention for making a packing and displaying box 14. The basis of the blank 1 is a cardboard, which is punched into the desired base form. The cardboard comprises a bottom surface 2, a front wall 3, a back wall 4 and two side walls 5. The front wall 3 and the rear wall 4 comprise prolongations preferably in the form of rough surfaces 6. On the bottom surface 2 four grooves 7  
15 are punched in the area of the longitudinal edges of the bottom surface 2. The side walls 5 each comprise two extensions 8 which correspond to the grooves 7 on one side of the bottom surface 2. Further, as shown in Fig. 1, on each side wall 5, two flaps 9 are located thereon which are in plane with the unfolded blank 1. The flaps 9  
20 are provided on the side walls 5 by slitting the appropriate shape of the flaps 9 into the side walls 5 with punching a little hole 10 below each flap 9. On the plane blank 1 a number of folds 11 and double folds 12 are provided for folding the blank 1 into the packing and displaying box 14 according to a specific pattern.

To assemble the packing and displaying box 14 according to the present invention,  
25 the front wall 3 and the rear wall 4 are folded vertically with regard to the plane bottom surface 2. The prolongation in the form of rough surfaces 6 of the front and rear walls 3, 4 are then folded vertically with regard to the front and rear walls 3, 4, and the side walls 5 are afterwards folded around the double fold 12, so that the extensions 8 may engage into the corresponding grooves 7 to affix the walls 3, 4 and

5 the side walls 5 in an upright position. By folding the side walls 5 around the double  
fold 12 the flaps 9 will automatically raise from the surface plane of the side walls 5  
and will project inwardly and will align in a position departing substantially from the  
verticality, preferably forming an angle with the vertical of more than 40°, more  
preferably more than 60°, still more preferably more than 80° and most preferably  
10 being substantially horizontal (angle of 90° with the vertical), when the extensions 8  
are engaged with the grooves 7.

A folded and assembled packing and displaying box 14 according to the present  
invention is shown in Fig. 2. As may be seen from Fig. 2., the packing box 14 may  
comprise a number of primary packages 13, in Fig. 2 six primary packages 13 are  
15 located in the packing box 14. Of course, for every primary package 13 at least one  
flap 9 may be provided to stabilize the primary package 13 in the packing box 14  
according to the present invention. Each flap 9 may loosely engage with a side  
portion of a primary package 13, preferably comprising an indentation 15 for  
improved engagement. However, for example in case that six primary packages 13  
20 are to be located in the packing box 14, only four flaps 9 are necessary as a  
minimum, wherein the flaps 9 are alternately arranged on the side walls 5 to  
stabilize the second to fifth primary package 13. The first primary package 13 in the  
packing and displaying box 14 does not need a stabilizing flap 9, since the first  
primary package 13 is stabilized by the front wall 3 and the second primary package  
25 13. When the first primary package 13 is taken out from the packing and displaying  
box 14, the second primary package 13 is prevented from falling by its flap 9. The  
third to fifth primary packages 13 are stabilized accordingly. In case, only the sixth  
primary package 13 is left in the packing and displaying box 14 it is stabilized by the  
rear wall 4.

30 Of course, the number of flaps 9 may be adjusted according to the requirements of  
the primary packages 13. Moreover, the shape and the dimension of the flaps may be  
adjustable. Also, one may imagine to arrange the flaps 9 between the primary  
packages 13 for stabilization in which case of course there will be no advantage in

- 5 providing primary packages 13 with an indentation 15 thereon. Further, the shape of the front and rear walls 3, 4 and the side walls 5 may be adjusted as required. For example, as shown in Fig. 2, the front wall 3 may comprise a cutout to improve the appearance of the primary packages 13 in the packing and displaying box 14 as visibility of the first primary package 13 is enhanced.
- 10 The features disclosed in the foregoing description, in the claims and/or in the accompanying drawings may, both separately and in any combination thereof, be material for realizing the invention in diverse forms thereof.